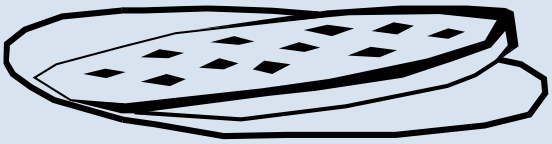
Source Control



What We Do

The Wastewater Treatment Division's responsibilities begin even before wastewater enters King County pipes and treatment plants. The WTD works with local businesses, hospitals and industries to restrict the type and amount of industrial waste they discharge into the sewer system. And it works with local cities and sewer agencies to reduce the amount of clean water entering sewer pipes.

Sources of wastewater include homes, schools, businesses and industries near Lake Washington, Elliott Bay, the Duwamish River and other local waterways.

What We've Done

Controlling Industrial Waste

Since 1969, WTD's Industrial Waste Program has required industries to pretreat their wastewater before discharging into the sewer. The purpose: to prevent businesses from discharging substances that can degrade the wastewater treatment process, harm workers, damage facilities, or reduce surface-water quality and the quality of biosolids and reclaimed water.

Industrial waste staff educates companies about pollution control laws and environmentally friendly methods for pretreating industrial waste. And they aggressively pursue companies that dump waste illegally. County staff can trace pollutants to their sources when spills occur.

Our efforts have been successful, reducing dramatically the amount of metals going through the treatment system and ending up in the environment. Our industrial waste program, a first of its kind in the nation, is a model for other communities.

In 2001, the program issued notices to 29 local companies for violating rules and regulations that control wastes discharged to the sewer system. But the program also gave awards to more than half the 149 eligible industrial customers for their excellent record of compliance during the previous year.

King County's top EnvirOvation Award went to the Boeing Commercial Airplane Group in Renton. The award goes to companies that have voluntarily implemented an innovative pollution prevention strategy, significantly updated their wastewater pretreatment equipment or methods, significantly reduced their water use, or significantly reduced the amount of waste they produce.

Reducing Infiltration and Inflow

At least 75 percent of the peak flows traveling through King County sewer lines during winter storms begin the journey as clean water. It enters the

Industrial waste staff works with companies on methods to pretreat wastewater before discharging to the sewer system.

King County samples the waste coming from industries to make sure it meets pretreatment standards.

Infiltration and Inflow - The Challenge

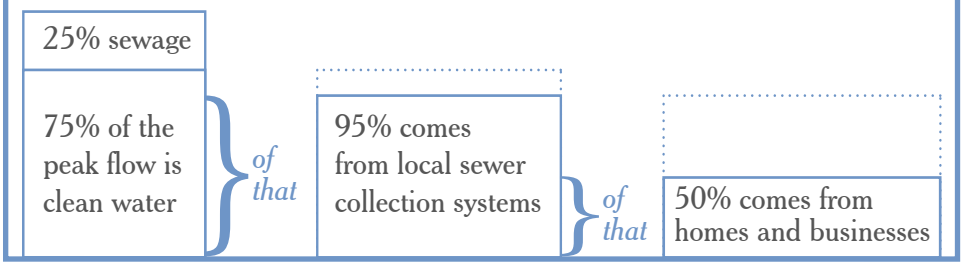


Chart shows the percentage of clean water treated at the South Treatment Plant during periods of heavy rain.

system through cracked pipes, leaky manholes or improperly connected storm drains, downspouts and sump pumps.

The county's Infiltration and Inflow Program is working to change that. The program is a partnership with local cities and sewer districts that actually collect wastewater from homes, schools, businesses and other commercial and residential properties.

Handling infiltration and inflow (I/I) of clean water into sewer pipes is expensive because it ends up being treated like sewage. Inflow comes from stormwater, and infiltration comes from groundwater. That extra water in sewer pipes also can cause overflows and require new, larger facilities to convey and treat the mix of clean water and sewage.

In January 2002, the I/I Program completed flow monitoring to identify the scope of the problem. The county is using that flow information in a five-year effort to develop a cost-effective program for controlling I/I.

275 miles
of sewer lines
countywide

24/7

$1.8 billion
planned in facility
improvements

What's Ahead

Repairing Leaks in the System

Working with local sewer districts and cities, the I/I Program is moving forward with 10 pilot projects to test rehabilitation techniques and costs, and determine what, where and when improvements are needed. And it's developing standards and policies for local agencies on new construction, rehabilitation of existing systems and system maintenance.

The pilot projects are in Auburn, Brier, Kent, Kirkland, Lake Forest Park, Mercer Island, Redmond, and the Ronald and Skyway sewer districts. A combined project to study manhole corrections will be conducted in the Coal Creek, Northshore and Val Vue sewer districts.

In 2002, sewer system evaluations (using TV inspections, smoke testing and other methods) were conducted to detect excessive clean water flows. Design and construction of various control measures in each pilot area is scheduled for 2003.